Working Together

Technical interaction with transportation personnel is an excellent by-product of the mobile asphalt pavement laboratory activities. On-site field testing, conducted for validation and implementation, benefits both the FHWA as well as state and local agencies. New technology is exposed to real-world materials and construction. Some on-site activities will include:

- Equipment validation
- Field evaluation of asphalt mixes
- New PRS introduction and implementation
- Presentations at industry conferences, showcases, universities, state agencies
- Evaluation of new materials and pavement testing methodology
- Publications in journals/proceedings

QC/QA testing at FHWA Accelerated Load Facility

Mix preparation conducted inside mobile trailer

Contacts

If you are interested in the services provided by the Mobile Asphalt Pavement Mixture Lab, contact the FHWA Resource Center or your State's FHWA division office. You can also reach the mobile laboratory staff directly: Leslie Myers, Project Manager, (202)-366-1198, and Chuck Paugh, Mobile Asphalt Pavement Laboratory Manager at (202)-366-6640.

Who to look for?

(***from left***): **Roustam Djoumanov, Josh Thompson, Brendan Morris, Chuck Paugh**

US Department of Transportation
Federal Highway Administration
Office of Pavement Technology
400 Seventh Street, SW
Washington, DC 20590

Publication No. FHWA-IF-03-009

FHWA

Mobile Asphalt Pavement Mixture Laboratory

Bringing Asphalt Pavement Technology Development To Your Doorstep

US Department of Transportation
Federal Highway Administration

Purpose & Goals

Technology development is the new primary focus of the mobile asphalt pavement mixture laboratory. The mobile laboratory is staffed with experienced technicians and engineers who perform detailed testing and analysis to support successful implementation of new asphalt technology. Three key goals are to:

◊ Develop, test, evaluate, and implement Superpave performance prediction tests nationally.

◊ Resolve national issues related to implementation of new pavement technology with transportation partners.

◊ Complete development and support validation of performance-related construction specifications.

Development Activities

IMPROVED SPECIFICATIONS

The mobile asphalt laboratory contributes to the rigorous refinement of performance-related specifications (PRS). Activities include fine-tuning test protocols and QC/QA procedures.

Successfully resolve national issues related to implementation of new pavement technology

"Shadow testing" validation of mix and aggregates at the plant, laboratory, and construction site can be done with new equipment.

Study of effects of lime in asphalt mixtures on performance

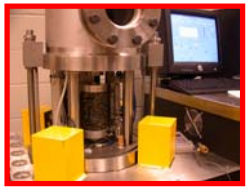
Test data is collected on project site to evaluate test repeatability and refine test procedures.

ADVANCED PERFORMANCE TESTING

In order to achieve the benefits of performance prediction, new products are evaluated in the mobile lab. Field validation is underway to identify and assess inputs to the 2002 pavement design guide.

Cutting-edge performance test equipment on-board the mobile asphalt laboratory includes the simple performance (triaxial shear) test and the aggregate imaging system.

View of simple performance test loading apparatus



Simple performance test

Dynamic modulus of an asphalt mix is measured using the triaxial shear test. Video imaging is used to determine fine and coarse aggregate shape, texture, and angularity. A specimen fabrication (core/saw) device for the triaxial shear device is also installed.

Aggregate Imaging System

CONVENTIONAL TESTING

In addition to the new performance tests, a plethora of conventional asphalt pavement mix design tests can be run from the mobile laboratory.

Introduce critical input into alternative contracting methods and techniques

An example of some typical tests include:

◊ Asphalt content by both methods

◊ Short & long term aging of HMA

◊ HMA density by means of gyratory compactor

◊ Aggregate consensus properties

◊ Percent air voids in compacted mix

◊ New rapid, automated testing equipment (SSDetect, Corelok, T84)

◊ Density of HMA in-place by nuclear method

◊ Aggregate standard tests